



PGL North Project - Installation of new HP/MP Vault

The Peoples Gas Light and Coke Company  
System Modernization Program  
**ICC 2018 4th Quarter Report**

SMP Progress through: December 31, 2018  
Published: February 14, 2019

PEOPLES GAS®

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## 1. Summary Observations & Analysis

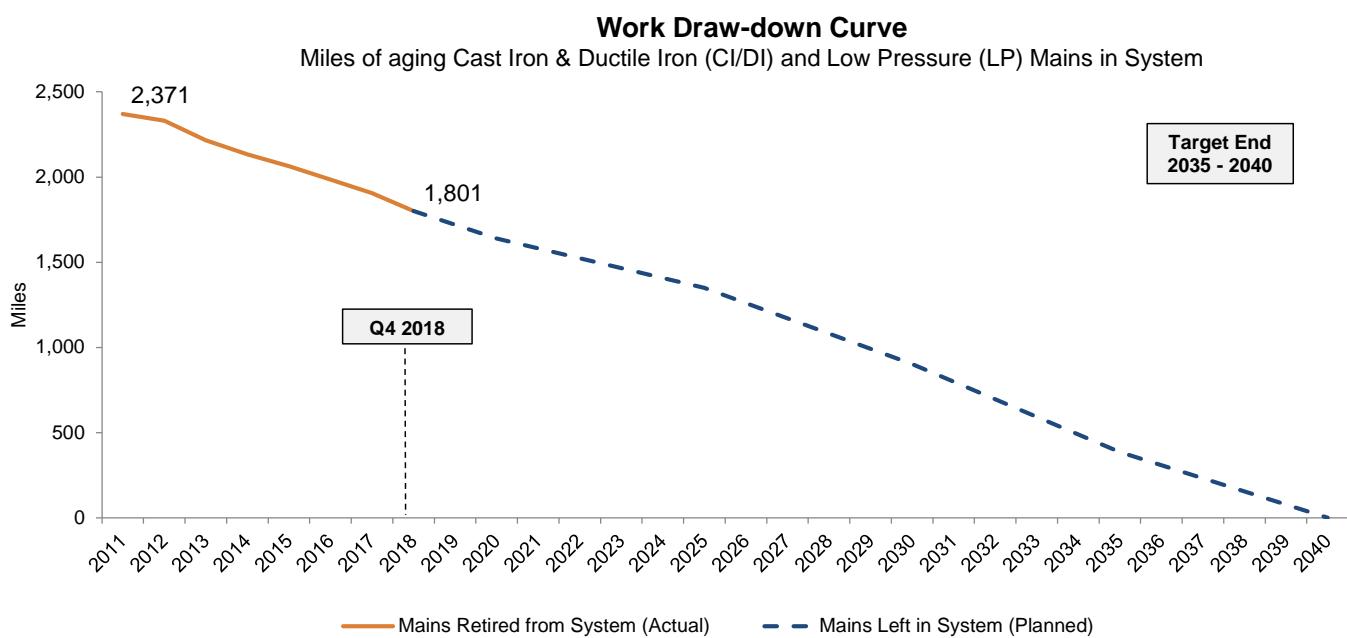
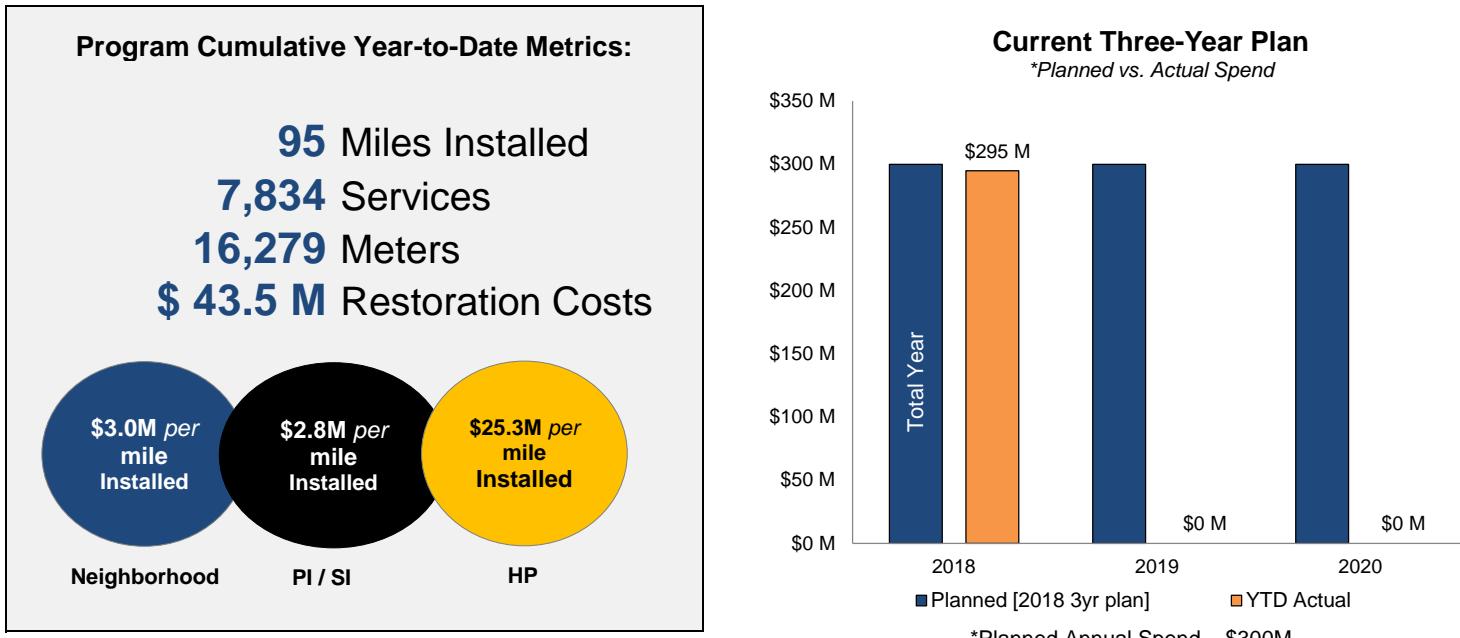
Enclosed is Peoples Gas' System Modernization Program (SMP) Fourth Quarter 2018 Report. The information displayed on the pages that follow are actual results recorded from January 2018 through December 2018 as measured against the plan established in the fourth quarter of 2017.

Peoples Gas continued to see variability with respect to both costs and installed/retired main and meters when compared to its 2018 plan. As explained below, the primary cause of this variability was adjustments to the mix of SMP work done in 2018 to take advantage of opportunities presented by third party construction projects. While these adjustments resulted in variations from the 2018 plan, they improved the collaboration of all stakeholders involved that utilize the City of Chicago public right-of-way. This quarter-to-quarter and year-to-year variability also supports the need to view the SMP over multiple years to get a realistic picture of program progress and performance.

Peoples Gas continues to make good progress on modernizing its natural gas system. As in past quarters, the rapid pace of economic development and modernization of sewer, water, communications, and road infrastructure required changes to our execution plan. New construction projects by multiple entities performing work in the public way created numerous opportunities to collaborate and share costs, but also deferred planned neighborhood work from one year to the next as resources were rebalanced.

- Neighborhood cost per installed mile remained steady but higher than planned throughout 2018. The need to accommodate emergent Public Improvement and finish the Northwest Interconnect Project (High Pressure) deferred 13 lower cost neighborhood projects that were originally slated for 2018 to 2019.
- Public Improvement/System Improvement (PI/SI) cost per installed mile were also impacted by variability in the projects being executed in 2018. There were over 25 new Public Improvement projects identified after the plan for the year was set including some projects in the Central Business District. As a result, several larger System Improvement projects were deferred to 2019.
- In 2018 Peoples Gas determined that completing more mark and bar activities to support 2019 projects would materially improve our flexibility and timeliness in the field. We grew our backlog in 2018 from approximately 3,000 to 11,000 mark and bar completions by year end. While this negatively impacts our dollar per meter in 2018, we greatly improved the value to our customers by reducing construction timelines, and expediting restoration. Nonetheless, as the process continues to mature and new employees grow their experience, we expect that efficiency will improve without sacrificing the substantial customer benefits this process has delivered.
- Peoples Gas spent more on High Pressure work in 2018 than originally budgeted as work from 2017 was re-sequenced and completed in 2018. A majority of the deferred work involved pressure regulation facility installation and associated restoration. Although the cost per mile was higher in 2018 due to this resequencing, the cost per installed mile for the project is still forecasted to be in line with the planned cost per installed mile when viewed across the multi-year installation timeline.
- Year-to-date (YTD) installation quantities were less than planned, as noted above, as we focused on emergent projects. This reduction in main installation quantities also reduced the anticipated number of services, meters, and field retirement quantities.

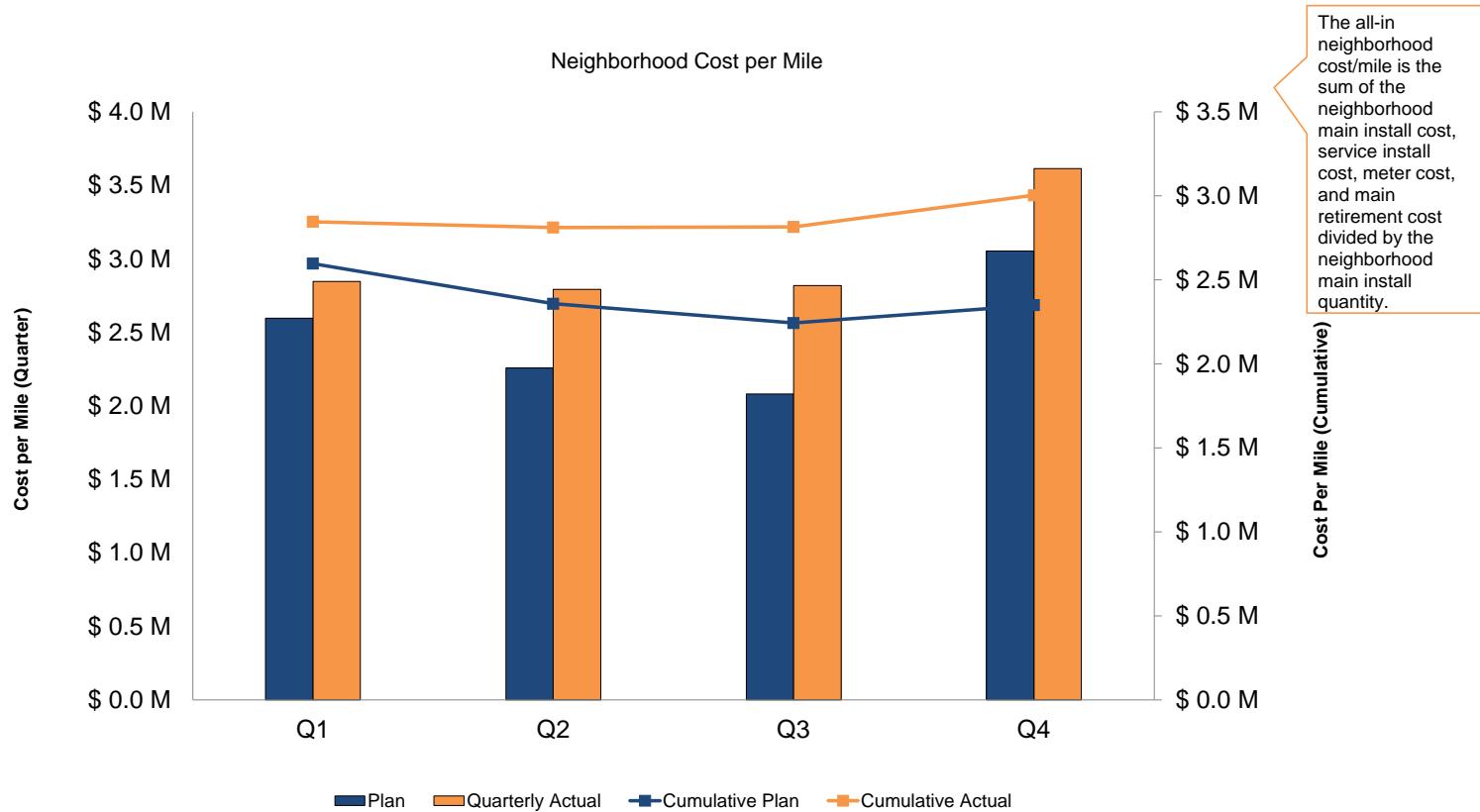
## 2. High Level Program Status



# Peoples Gas - System Modernization Program **2018 Q4 Report**

Neighborhood Replacement Program – Projects that Peoples Gas ranks, designs, and constructs based on the most at risk system components identified by the company's neighborhood ranking tool.

## 3A. Neighborhood Program Performance



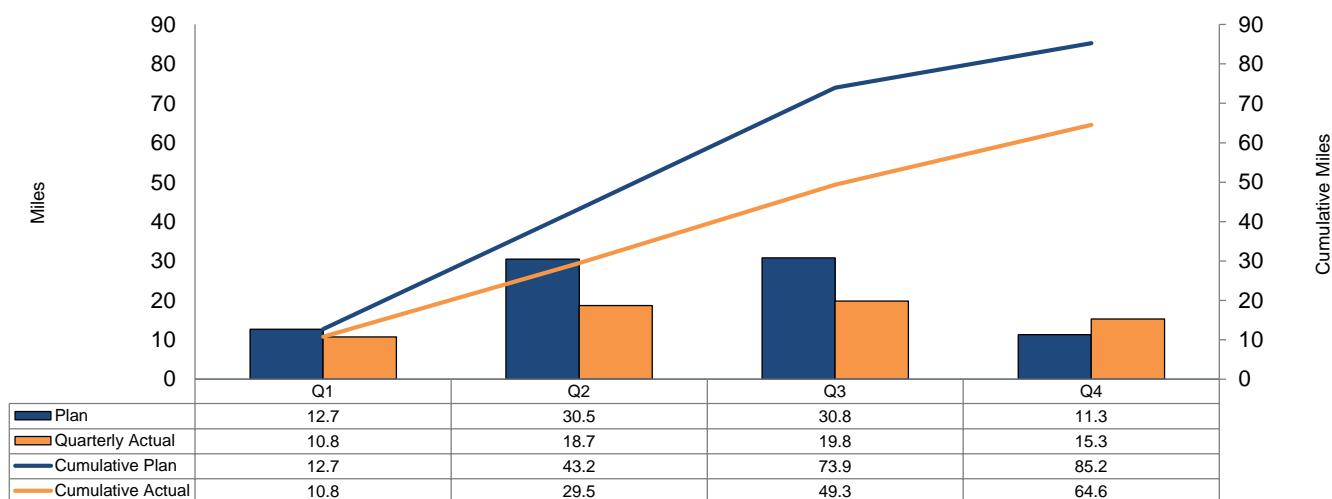
## Year-to-Date Numbers

	Cumulative Planned			Cumulative Actual		
	Cost (A)	Unit (B)	Cost/Unit (C=A/B)	Cost (D)	Unit (E)	Cost/Unit (F=D/E)
<b>Main Install</b>	\$ 126.0 M	85.2	\$1.5 M / install mile	\$ 138.8 M	64.6	\$2.1 M / install mile
<b>Main Retirement</b>	\$ 5.5 M	53.5	\$0.1 M / retire mile	\$ 5.3 M	39.3	\$0.1 M / retire mile
<b>Service Replacement</b>	\$ 46.7 M	8,239	\$5,673 / service	\$ 21.2 M	5,564	\$3,806 / service
<b>Meter Moves (allocation)</b>	\$ 22.1 M	15,649	\$1,409 / meter	\$ 28.8 M	11,891	\$2,367 / meter
<b>TOTAL</b>	<b>\$ 200.3 M</b>	<b>85.2</b>	<b>\$2.4 M / install mile</b>	<b>\$ 194.0 M</b>	<b>64.6</b>	<b>\$3.0 M / install mile</b>

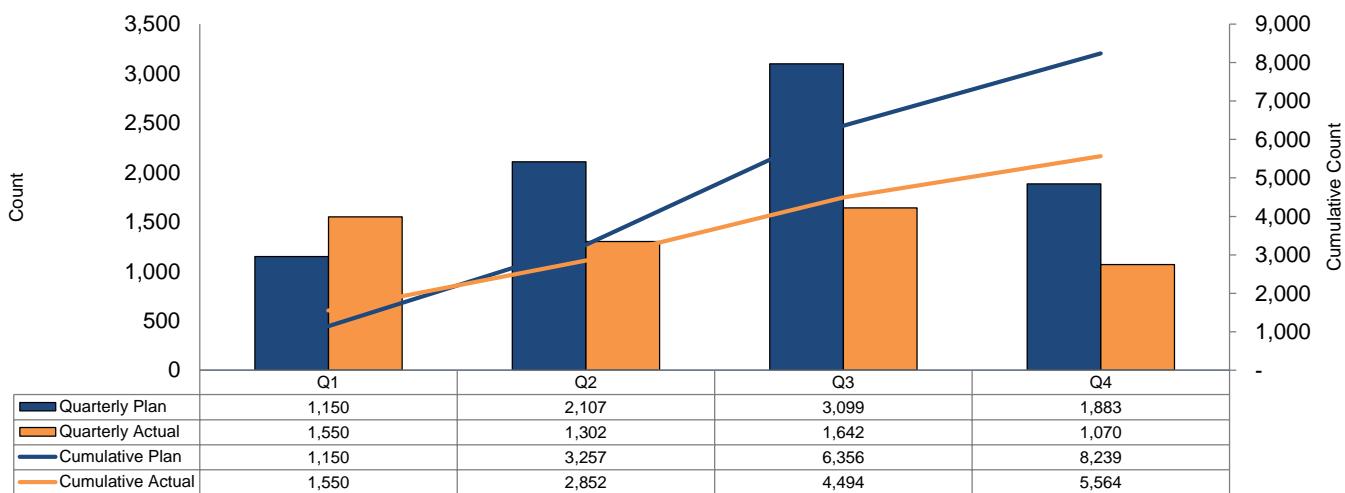
# Peoples Gas - System Modernization Program **2018 Q4 Report**

## 3B. Neighborhood - Quantity Graphs

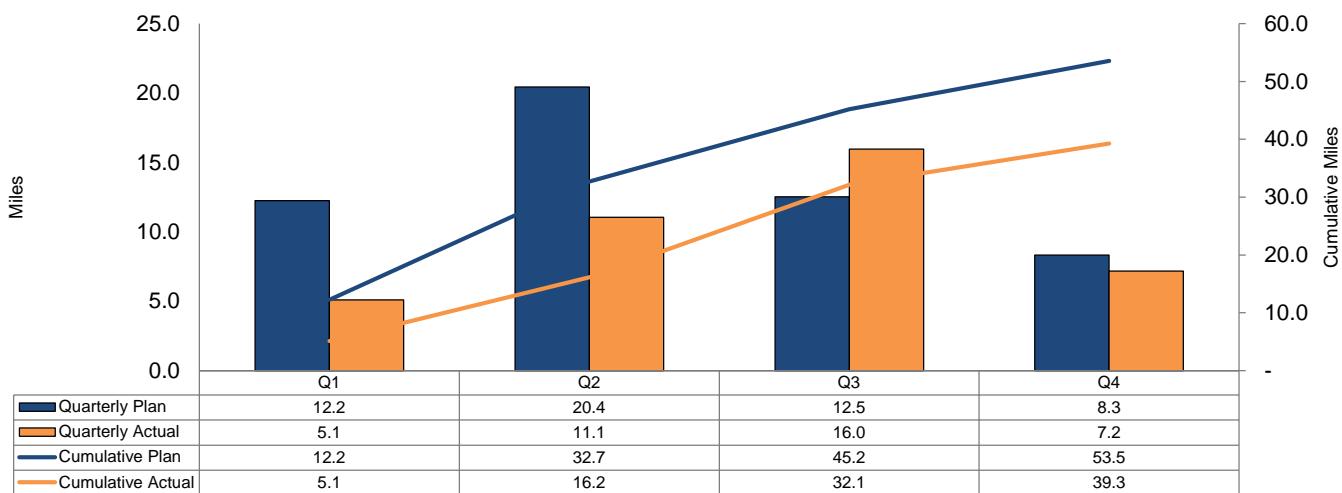
Main Installation Miles



Service Installation Count

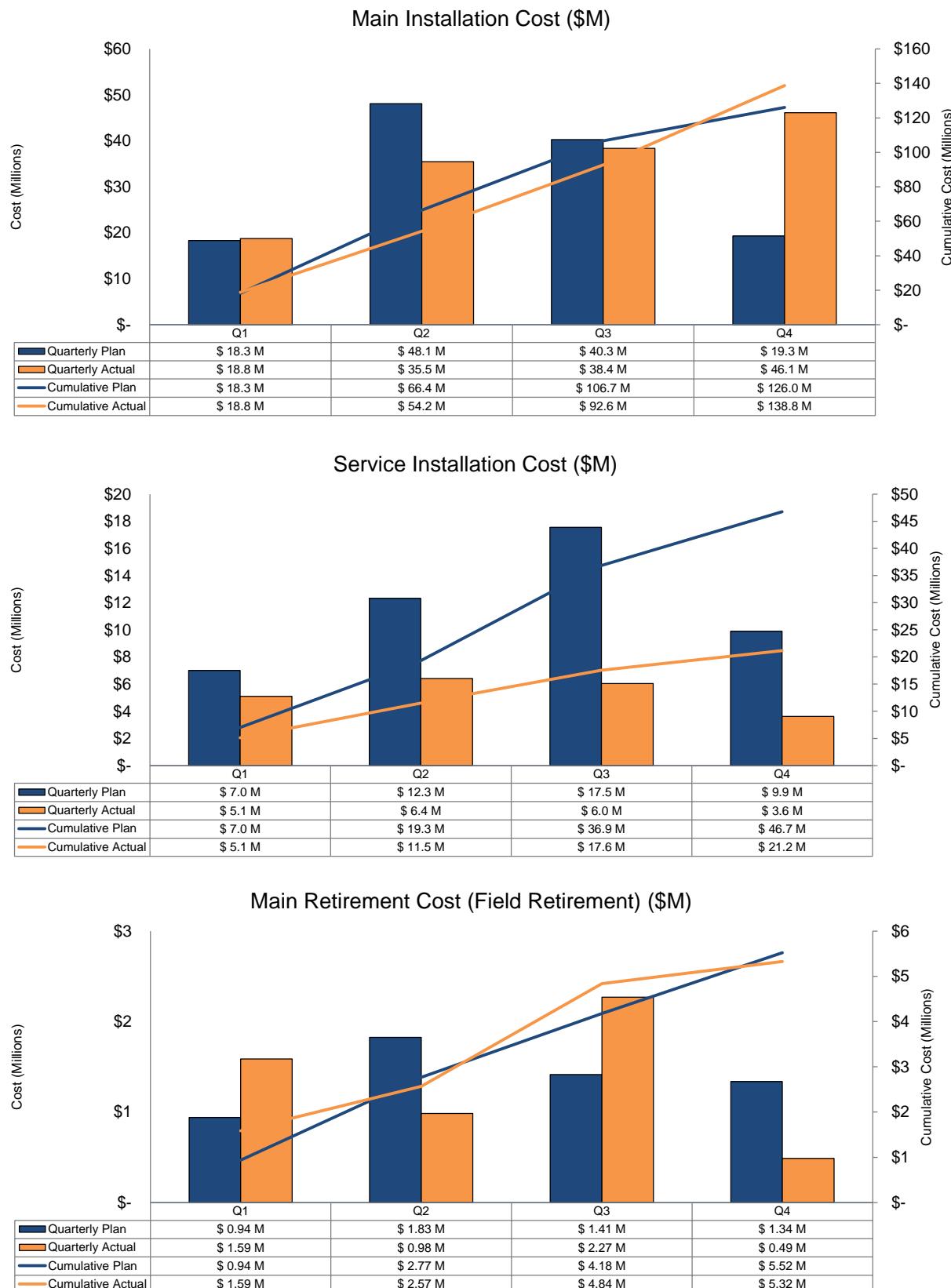


Main Retirement Miles (Field Retirement)



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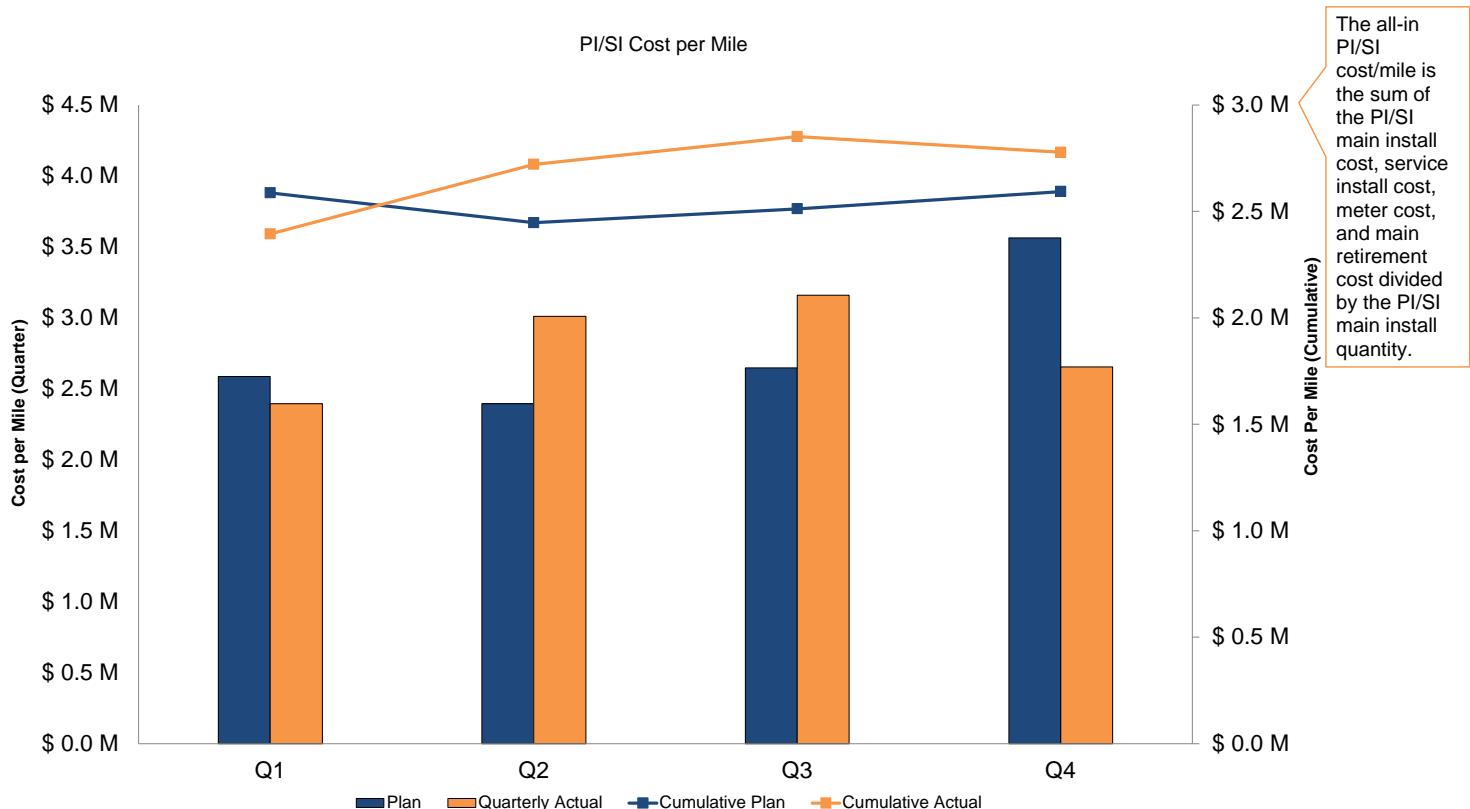
## 3C. Neighborhood - Cost Graphs



# Peoples Gas - System Modernization Program **2018 Q4 Report**

Public Improvement/System Improvement (PI/SI) - Projects similar to the Neighborhood Replacement Program, but other factors require the upgrade or relocation of existing vulnerable material - Peoples Gas is responding to a third party request to relocate or replace facilities due to conflicts with the third party or addressing capacity or reliability concerns.

## 4A. Public Improvement / System Improvement Program Performance

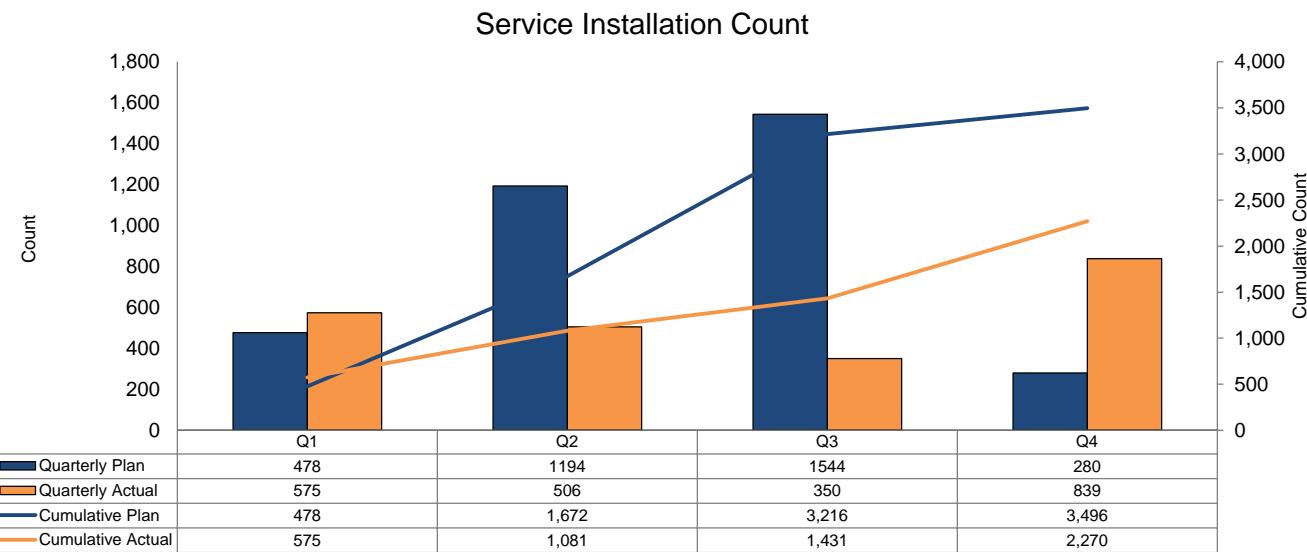
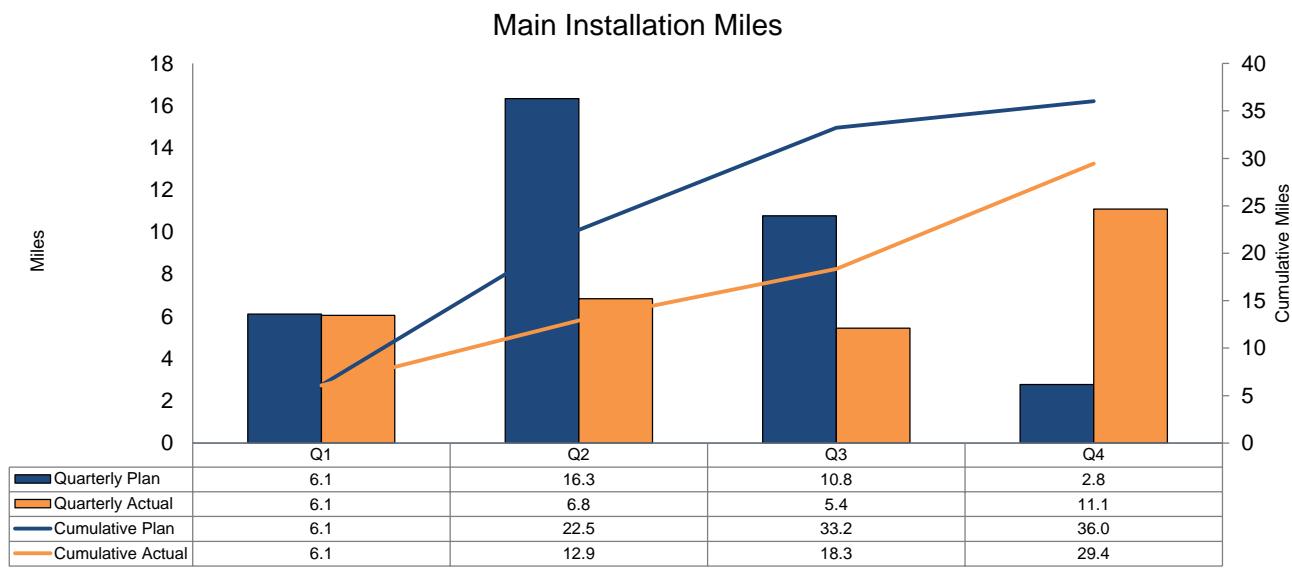


### Year-to-Date Numbers

	Cumulative Planned			Cumulative Actual		
	Cost (A)	Unit (B)	Cost/Unit (C=A/B)	Cost (D)	Unit (E)	Cost/Unit (F=D/E)
Main Install	\$ 57.0 M	36.0	\$1.6 M / install mile	\$ 58.3 M	29.4	\$2.0 M / install mile
Main Retirement	\$ 5.1 M	21.4	\$0.2 M / retire mile	\$ 3.5 M	12.7	\$0.3 M / retire mile
Service Replacement	\$ 22.3 M	3,496	\$6,377 / service	\$ 10.1 M	2,270	\$4,450 / service
Meter Moves (allocation)	\$ 9.0 M	6,277	\$1,435 / meter	\$ 9.8 M	4,388	\$2,367 / meter
<b>TOTAL</b>	<b>\$ 93.4 M</b>	<b>36.0</b>	<b>\$2.6 M / install mile</b>	<b>\$ 81.7 M</b>	<b>29.4</b>	<b>\$2.8 M / install mile</b>

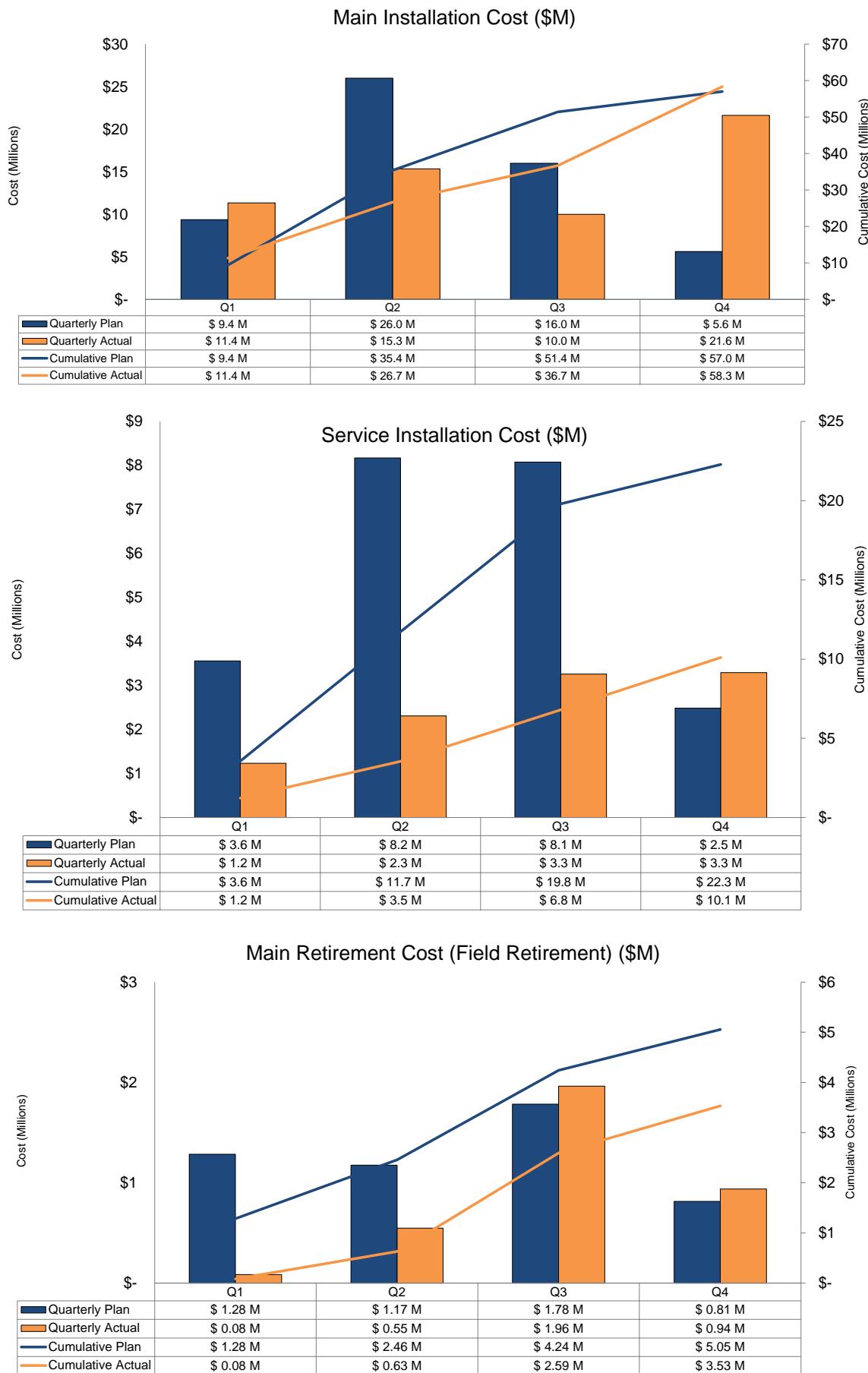
# Peoples Gas - System Modernization Program **2018 Q4 Report**

## 4B. Public Improvement / System Improvement - Quantity Graphs



# Peoples Gas - System Modernization Program **2018 Q4 Report**

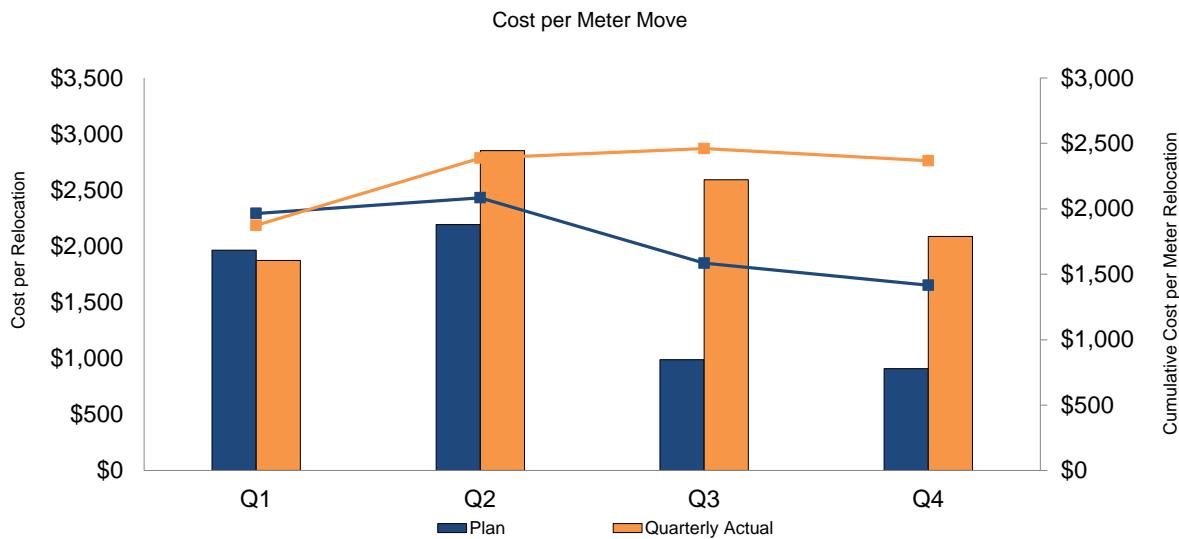
## 4C. Public Improvement / System Improvement - Cost Graphs



# Peoples Gas - System Modernization Program **2018 Q4 Report**

Meter Relocation – Costs associated with moving customer meters as part of the system modernization program.

## 5A. Meter Moves Program Performance

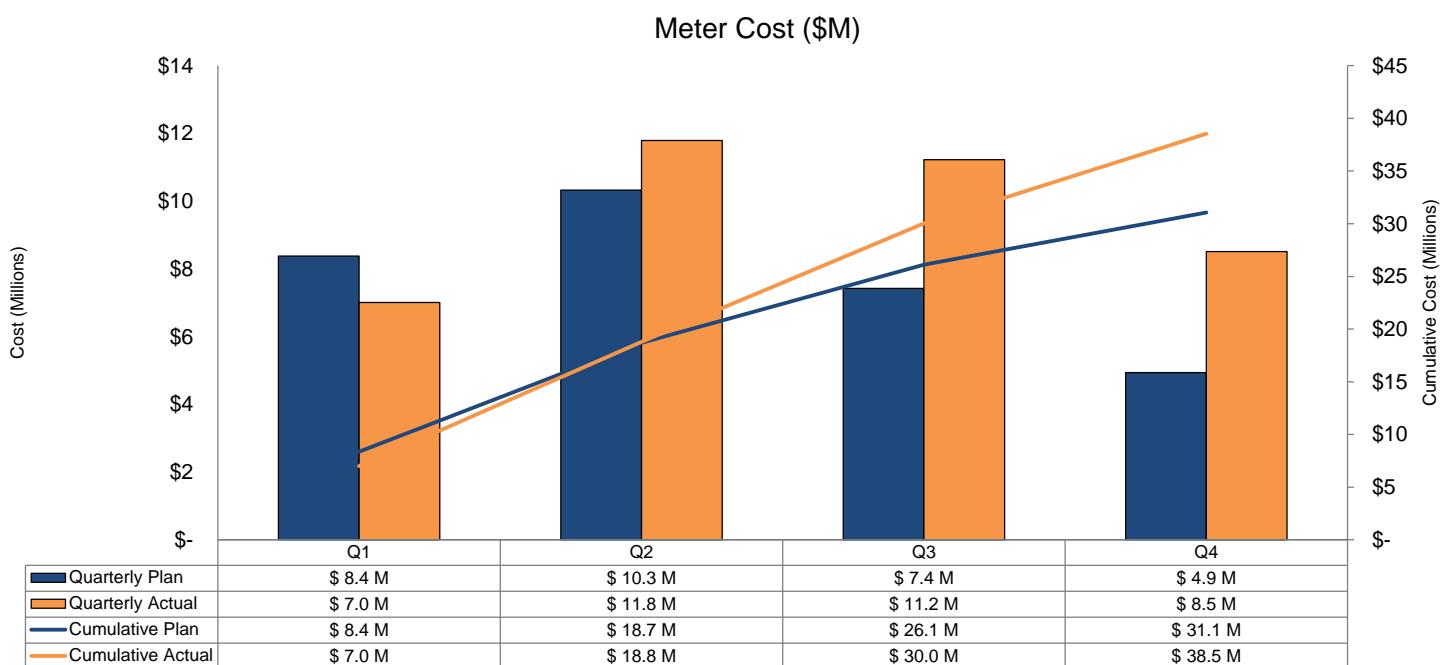
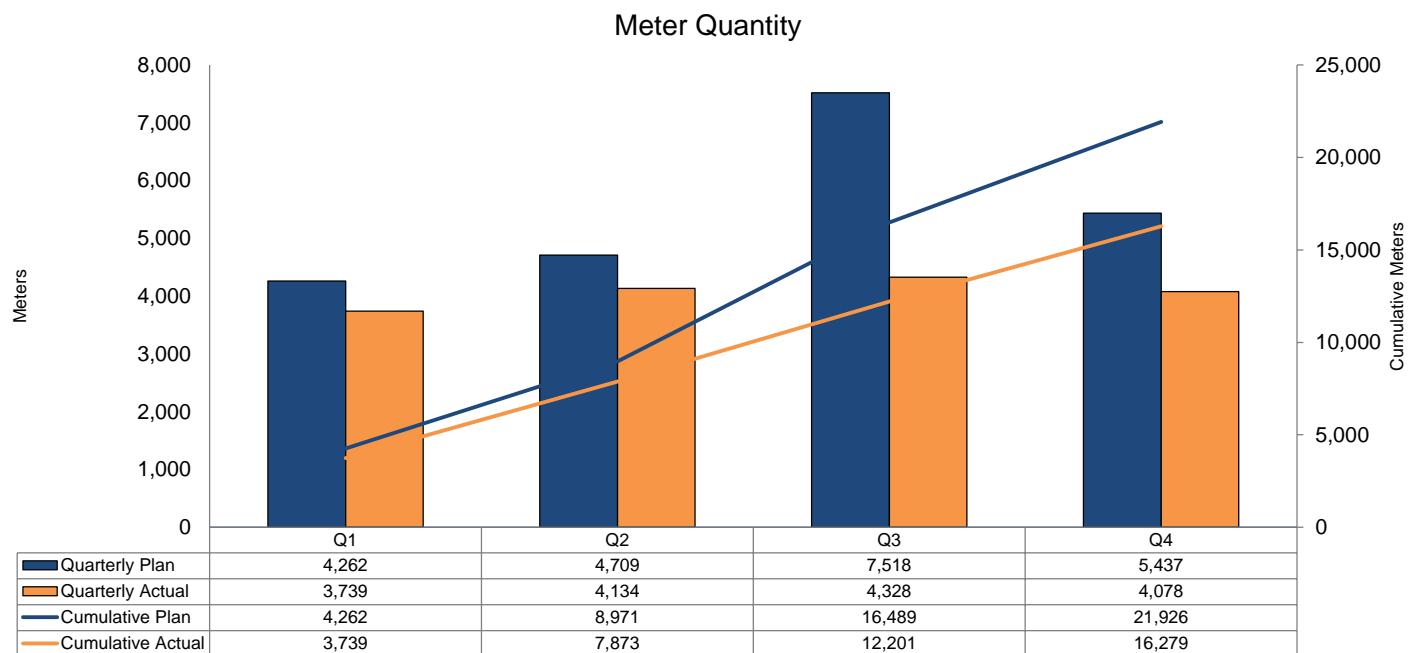


### Year-to-Date Numbers

	Cumulative Planned			Cumulative Actual		
	Cost (A)	Unit (B)	Cost/Unit (C=A/B)	Cost (D)	Unit (E)	Cost/Unit (F=D/E)
<b>Meter Moves (allocation)</b>	\$ 31.1 M	21,926	\$1,417 / meter	\$ 38.5 M	16,279	\$2,367 / meter

# Peoples Gas - System Modernization Program **2018 Q4 Report**

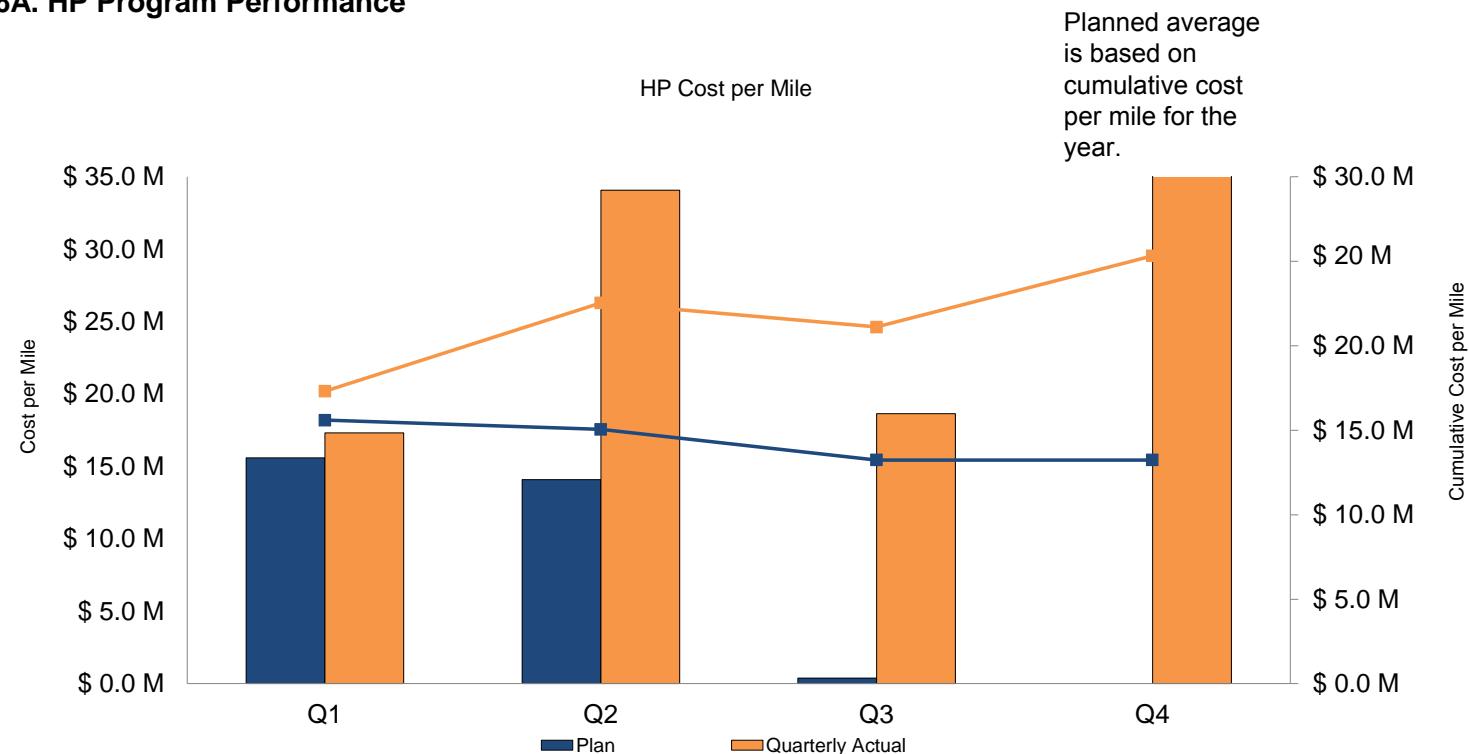
## 5B. Meter Relocation Quantity and Cost



# Peoples Gas - System Modernization Program **2018 Q4 Report**

**High Pressure** - Projects that support upgrading the system from Low Pressure to Medium pressure as well as projects establishing records and maximum allowable operating pressures.

## 6A. HP Program Performance

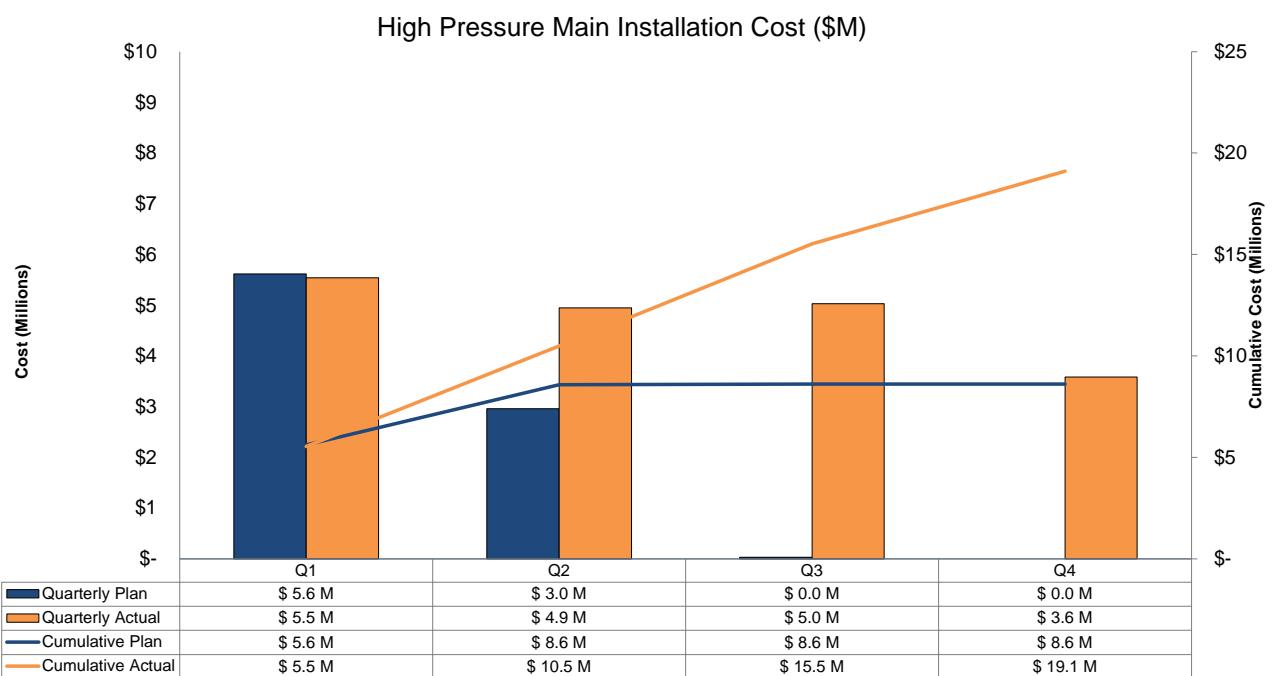
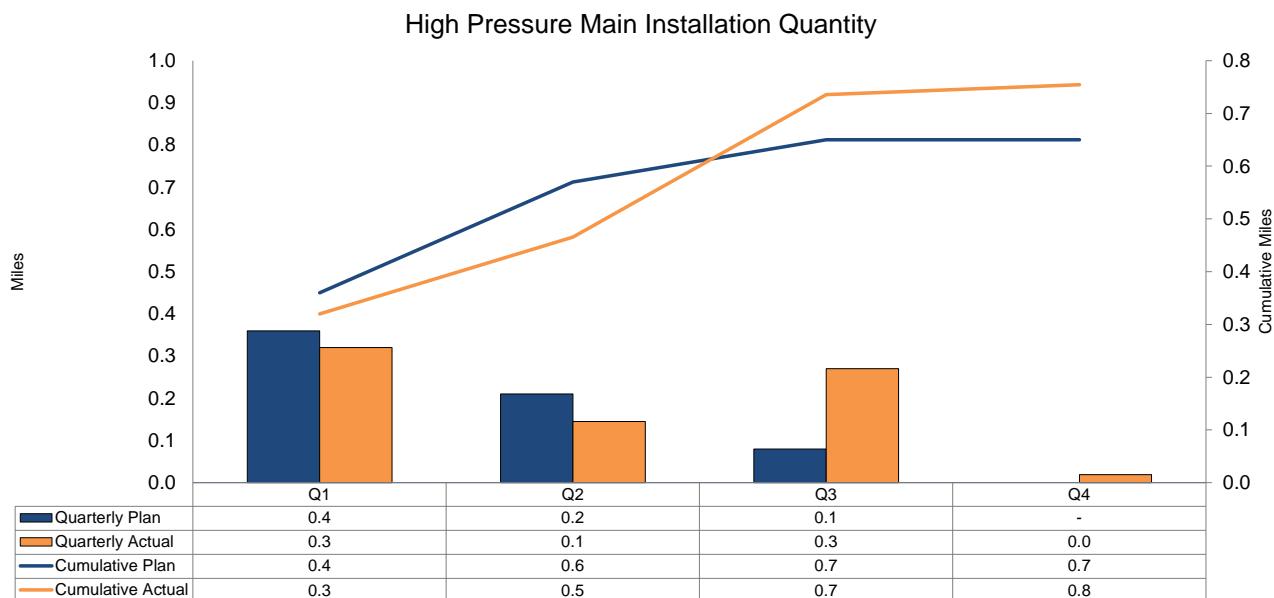


### Year-to-Date Numbers

	Cumulative Planned			Cumulative Actual		
	Cost (A)	Unit (B)	Cost/Unit (C=A/B)	Cost (D)	Unit (E)	Cost/Unit (F=D/E)
Main Install	\$ 8.6 M	0.65	\$13.2 M / install mile	\$ 19.1 M	0.75	\$25.3 M / install mile

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## 6B. High Pressure Main Installation





# Peoples Gas - System Modernization Program *2018 Q4 Report*

## 7B. Uncollectibles Metrics

### B.1. Dollar Amount of Uncollectibles

	2018-01	2018-02	2018-03	2018-04	2018-05	2018-06	2018-07	2018-08	2018-09	2018-10	2018-11	2018-12	YTD Total	
S.C. 1 Heating - Low Income <sup>(1)</sup>	\$ 28,638.72	\$ 33,273.05	\$ 22,050.04	\$ 49,565.81	\$ 53,691.01	\$ 8,927.38	\$ 164,634.47	\$ 246,133.73	\$ 261,629.01	\$ 196,407.24	\$ 182,665.14	\$ 200,846.35	\$ 1,448,461.95	
S.C. 1 Heating - Not Low Income <sup>(1)</sup>	\$ 1,922,930.47	\$ 1,528,553.72	\$ 1,741,809.12	\$ 2,858,555.51	\$ 2,599,283.07	\$ 131,787.82	\$ 2,532,215.59	\$ 2,687,564.91	\$ 2,682,973.06	\$ 3,434,168.59	\$ 2,643,262.39	\$ 3,339,725.03	\$ 28,102,829.28	
S.C. 1 Non-Heating	\$ 151,256.63	\$ 115,896.46	\$ 113,278.27	\$ 161,615.06	\$ 173,972.33	\$ 2,475,082.04	\$ 136,084.43	\$ 153,320.80	\$ 178,688.97	\$ 520,341.59	\$ 505,229.88	\$ 639,182.28	\$ 5,323,948.75	
S.C. 2	\$ 179,717.18	\$ 215,767.31	\$ 168,537.15	\$ 99,257.08	\$ 429,511.21	\$ 251,692.52	\$ 411,793.67	\$ 418,670.65	\$ 318,267.93	\$ 396,596.34	\$ 461,930.20	\$ 276,800.96	\$ 3,628,542.18	
S.C. 4	\$ -	\$ -	\$ -	\$ 3,642.03	\$ -	\$ -	\$ -	\$ -	\$ 19,885.84	\$ -	\$ -	\$ -	\$ 23,527.87	
S.C. 8	\$ -	\$ -	\$ -	\$ -	\$ 751.85	\$ -	\$ 26.13	\$ 519.64	\$ 141.05	\$ -	\$ -	\$ (141.62)	\$ -	\$ 1,297.05
Total	\$ 2,282,543.00	\$ 1,893,490.54	\$ 2,045,674.58	\$ 3,173,387.34	\$ 3,256,457.61	\$ 2,867,515.89	\$ 3,245,247.80	\$ 3,505,831.14	\$ 3,461,444.81	\$ 4,547,513.76	\$ 3,792,945.99	\$ 4,456,554.62	\$ 38,528,607.08	

Notes:

<sup>(1)</sup>Low Income is defined as accounts that received LIHEAP funding in the current program year which runs September through August.

# Peoples Gas - System Modernization Program **2018 Q4 Report**

## 7C. Bill Impact Metrics

Average residential heating customer's monthly bill

Service Classification No. 1 - Residential Heating Customer

	<u>Therms<sup>(1)</sup></u>	<u>Base Rates<sup>(2)</sup></u>	<u>Rider QIP</u>	<u>Gas Charges</u>	<u>Other Riders<sup>(3)</sup></u>	<u>Other State Charges<sup>(4)</sup></u>	<u>State &amp; Municipal Taxes<sup>(5)</sup></u>	<u>Total</u>
<b>January</b>	206.94	\$ 81.79	\$ 5.71	\$ 68.21	\$ 7.86	\$ 0.53	\$ 18.65	\$ 182.75
<b>February</b>	180.96	\$ 75.58	\$ 5.20	\$ 58.65	\$ 6.77	\$ 0.53	\$ 16.58	\$ 163.31
<b>March</b>	122.26	\$ 61.55	\$ 5.18	\$ 39.47	\$ 4.51	\$ 0.53	\$ 12.21	\$ 123.44
<b>April</b>	76.36	\$ 51.44	\$ 5.66	\$ 23.41	\$ 3.22	\$ 0.53	\$ 8.86	\$ 93.12
<b>May</b>	30.08	\$ 39.20	\$ 5.63	\$ 9.22	\$ 1.27	\$ 0.53	\$ 5.38	\$ 61.24
<b>June</b>	29.59	\$ 38.40	\$ 6.51	\$ 9.17	\$ 1.26	\$ 0.55	\$ 5.37	\$ 61.27
<b>July</b>	16.87	\$ 35.58	\$ 6.51	\$ 5.35	\$ 0.73	\$ 0.55	\$ 4.47	\$ 53.18
<b>August</b>	15.86	\$ 35.30	\$ 6.81	\$ 5.78	\$ 0.69	\$ 0.55	\$ 4.48	\$ 53.60
<b>September</b>	17.26	\$ 35.56	\$ 6.95	\$ 6.17	\$ 0.74	\$ 0.55	\$ 4.58	\$ 54.56
<b>October</b>	59.24	\$ 44.69	\$ 6.78	\$ 18.41	\$ 2.49	\$ 0.55	\$ 7.50	\$ 80.43
<b>November</b>	102.66	\$ 54.12	\$ 6.60	\$ 35.66	\$ 4.37	\$ 0.55	\$ 10.91	\$ 112.23
<b>December</b>	170.88	\$ 68.95	\$ 7.36	\$ 77.73	\$ 7.79	\$ 0.55	\$ 17.64	\$ 180.03
<b>Calendar Year</b>	1,028.96	\$ 622.17	\$ 74.90	\$ 357.23	\$ 41.73	\$ 6.50	\$ 116.65	\$ 1,219.17

### Notes:

<sup>(1)</sup>Weather normalized therms

<sup>(2)</sup>Base Rate charges in effect and include Rider UEA, Rider VBA, Rider SSC, Rider VITA, and Rider ICTA

<sup>(3)</sup>Charges under Rider UEA-Gas Cost, Rider 11 and Rider EOA

<sup>(4)</sup>Additional state charges and PUAC under Rider 1

<sup>(5)</sup>Additional charges for state and municipal utility taxes under Rider 1







# Peoples Gas - System Modernization Program **2018 Q4 Report**

## 7D. System Modernization Program (SMP)

	D1.		D2.		D3.	
	SMP Dollars Spent	QIP Dollars Spent	SMP % of QIP	S.C. No. 1 Rider QIP <sup>(2)</sup>	S.C. No. 1 SMP <sup>(3)</sup>	
January <sup>(1)</sup>	\$ 21,873,918.39	\$ 18,663,052.64	117.2%	\$ 5.71	\$ 6.69	
February <sup>(1)</sup>	\$ 6,670,437.00	\$ 9,710,307.72	68.7%	\$ 5.20	\$ 3.57	
March <sup>(1)</sup>	\$ 22,124,324.74	\$ 22,047,020.03	100.4%	\$ 5.18	\$ 5.19	
April	\$ 31,162,812.11	\$ 32,017,946.29	97.3%	\$ 5.66	\$ 5.51	
May <sup>(4)</sup>	\$ 17,814,984.07	\$ 17,436,866.29	102.2%	\$ 5.63	\$ 5.75	
June	\$ 28,836,366.32	\$ 28,838,585.28	100.0%	\$ 6.51	\$ 6.51	
July	\$ 42,759,684.60	\$ 42,830,425.65	99.8%	\$ 6.51	\$ 6.50	
August	\$ 26,866,038.72	\$ 26,863,509.87	100.0%	\$ 6.81	\$ 6.81	
September	\$ 7,802,438.66	\$ 7,811,114.08	99.9%	\$ 6.95	\$ 6.94	
October	\$ 37,449,646.50	\$ 37,459,848.05	100.0%	\$ 6.78	\$ 6.78	
November	\$ 31,487,905.02	\$ 31,532,026.03	99.9%	\$ 6.60	\$ 6.59	
December	\$ 19,253,229.88	\$ 19,264,572.19	99.9%	\$ 7.36	\$ 7.35	
Calendar Year	\$ 294,101,786.01	\$ 294,475,274.12	99.9%	\$ 74.90	\$ 74.21	

### Notes:

<sup>(1)</sup>In January, 2018 Peoples Gas experienced both business and system process changes with the implementation of a new ERP system. As we worked through stabilizing these changes in the first quarter of 2018 we experienced abnormal splits between SMP and QIP spend.

<sup>(2)</sup>Rider QIP charges from Bill Impact Metric C4.

<sup>(3)</sup>Derived by taking D2. multiplied by the Rider QIP charges from Bill Impact Metric C4.

<sup>(4)</sup>QIP Dollars Spent this month are less than SMP Dollars Spent due to negative actuals in non-SMP work from an accrual reversal.

# Peoples Gas - System Modernization Program **2018 Q4 Report**

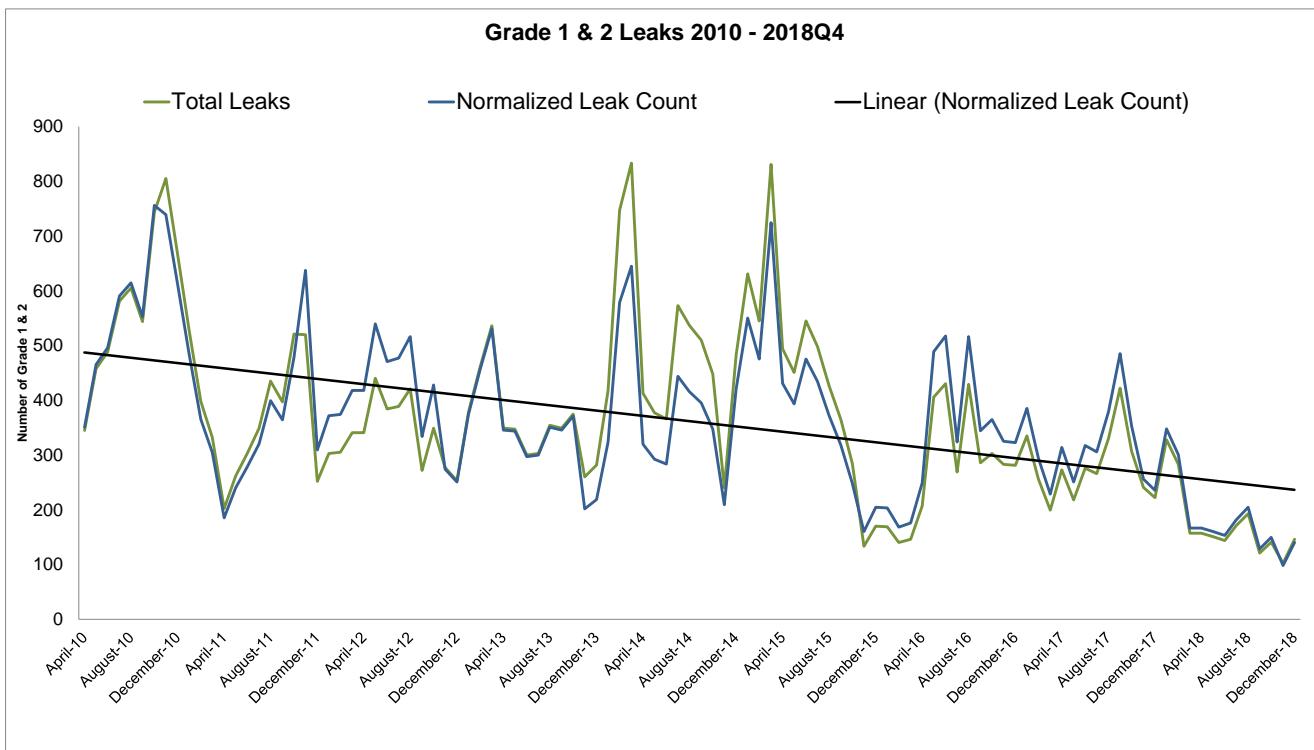
## 8. Company Overall Average Leak Rate

Company Leak Rate - Overall (both replaced and to-be-replaced mains)	Leak Count	2,641
	Mileage	1,787
	Leak Rate	1.48

$$\text{Leak Rate} = \text{Leak Count} \div \text{Mileage}$$

Company Leak Rate - Remaining Main (using only to-be-replaced mains)	Leak Count	2,587
	Mileage	1,362
	Leak Rate	1.90

$$\text{Leak Rate} = \text{Leak Count} \div \text{Mileage}$$

















# Peoples Gas - System Modernization Program **2018 Q4 Report**

## APPENDIX B - NEIGHBORHOOD LEAK RATES & 2 YEAR AVERAGE

NEIGHBORHOOD	2018 LEAK RATE (PER MILE)	2018 NORMALIZED RATE	NORMALIZED LEAK RATE (2 YR AVG)
West Rogers Park	1.27	1.35	1.13
West Town	2.45	2.60	2.19
West Woodlawn	2.39	2.54	2.63
Wicker Park	4.74	5.03	4.00
Wildwood	0.00	0.00	0.00
Winneconna Parkway	1.43	1.52	1.57
Woodlawn	1.41	1.49	2.07
Wrightwood	0.58	0.61	0.72
Wrightwood Neighbors	3.15	3.34	4.08
Wrigleyville	2.08	2.21	2.76

# Peoples Gas - System Modernization Program **2018 Q4 Report**

## APPENDIX C - PI/SI METRICS

Project	Construction Status	Driver	Install Miles	Retirement Miles	Services	Meters	Cost (\$M)	Meets UMRI Threshold*
60TH & GREEN	Complete - Q4	SI	0.6	0.2	34	112	\$.7	NO
65TH & WINCHESTER POOR SUPPLY	Complete - Q4	SI	0.9	0.5	60	48	\$1.7	NO
8600-8620 S PULASKI	Complete - Q4	SI	1.4	0.5	126	146	\$3.0	NO
SEWER 6429 - 114TH PL & EDBROOKE	Complete - Q4	PI	0.0	0.0	0	0	\$.1	NO
SEWER 6958A - 87TH & HONORE	Complete - Q4	PI	1.2	0.9	133	159	\$2.5	NO
SEWER 7002A - 64TH & PEORIA	Complete - Q4	PI	1.1	0.4	80	170	\$2.2	NO
SEWER 7315 - 108TH & WALLACE	Complete - Q4	PI	0.0	0.0	0	0	\$.6	NO
SEWER 7365 - CULLERTON & KEELER	Complete - Q4	PI	1.0	0.6	147	187	\$1.8	NO
SEWER 7369 - 92ND & MICHIGAN	Complete - Q4	PI	0.0	0.0	0	0	\$.1	NO

\* Main segment with a UMRI of 5.0 or greater that are adjacent to schools, hospitals and nursing homes and all other main segments with a UMRI of 6.0 or greater